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STATE OF COLORADO

COLORADO DEPARTMENT OF HEALTH

4210 East 11th Avenue
Denver, Colorado 80220
Phone (303) 320-8333



CHURCH DITCH

MAY 26 1988

Roy Romer
Governor

Thomas M. Vernon, M.D.
Executive Director

15300 W. 11th Ave. #72
GOLDEN, CO 80403

MAY 1 1988

May 16, 1988

Mr. Marvin D. Thurber
Director of Public Works
City of Broomfield
Number Six Garden Office Center
Broomfield, Colorado 80020

RE: Relocation of McKay and Upper Church Ditches in the Rocky Flats west buffer zone.

Dear Mr. Thurber,

In response to your request, the Hazardous Materials and Waste Management Division has reviewed the pertinent geologic and hydrologic data and groundwater sample analysis provided by the Rocky Flats facility in the Annual Groundwater Monitoring at Regulated Units report (March 1988), Part B Permit Application (November, 1986), the Post-Closure Care Permit Application (November, 1986), and the Remedial Investigation Report for the 903 Pad, Mound, and East Trenches Areas (December, 1987).

An estimated 66 million gallons of aqueous wastes containing high nitrate concentrations were sprayed in the west spray field between 1982 and 1985. The hydrogeologic situation appears conducive to migration of contaminants in this waste via groundwater in the Rocky Flats Alluvium. Slightly elevated concentrations of chlorine, nitrates, sulfates, and Total Dissolved Solids were detected in alluvial groundwater monitoring well 49-86. This well is immediately east of the north-south access road which crosses the west spray field and the site of the proposed ditch relocation. The maximum nitrate concentration, 16.3 mg/l, reported in the annual groundwater monitoring report, falls between the monthly average limit (10 mg/l) and weekly average limit (20 mg/l) of the National Pollution Discharge Elimination System (NPDES) permit issued by EPA.

Results of the initial investigation of the west spray field indicate that low concentrations of inorganic contaminants and possibly radionuclides are present in groundwater in the west spray field and vicinity. Considering that McKay and Upper Church ditches carry water to Great Western Reservoir, Broomfield's drinking water supply, the Division recommends piping the relocated ditch. It is preferable to pipe the entire ditch to prevent possible contamination from air dispersed particulates especially since the ditch will parallel the west access road which is heavily traveled. At a minimum, the Division recommends lining the ditch.

1/2 ADMIN RECORD

A-0011-000028

An alternative to relocating a portion of the ditch across the west spray field is to extend the ditch farther east and then cut north outside the west spray field boundary. Piping in this case may not be necessary along the entire extent of the ditch but is still recommended by the Division.

If you wish to discuss the proposal in more detail, please contact Patricia Corbetta at 331-4843 or Mike Sattler at 331-4844. The documents mentioned are available at this office for review.

Sincerely,



David Shelton
Division Director

DS/pc

cc: George Mathews, Boulder County Health Dept.
Nat Muillo, EPA